

PATENT SPECIFICATION

NO DRAWINGS

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COMPLETE SPECIFICATION

Improvements in or relating to Pastille Formulations

ERRATUM

SPECIFICATION No. 1,144,915

Page 1, Heading, Application Date: 24 Nov.,
1966, for "No. 52599/67." read "No.
52599/66."

THE PATENT OFFICE
28th April 1969

15 mulation or medicinal pastilles.
The primary object of a medicinal pastille is to provide a pleasant means of administering medicaments intended to bathe the mucous membranes. It is well known to use both hard and soft pastille bases, for different purposes.
20 The soft base is usually sugared and dissolves quickly in the mouth. The hard gum-gelatin base is resistant to all but the most vigorous chewing and lasts a longer time. At present these are always presented as separate formulations.
25 According to the present invention there is provided a medicinal pastille comprising
(a) a first solid portion, comprising a first medicament intended to provide a relatively prolonged medicinal effect, the said first portion being so formulated as to dissolve slowly in the mouth and thereby to provide slow release of the said medicament in the mouth; and
30
(b) a second solid portion, comprising a second medicament intended to provide faster medicinal effect than said first medicament, the said second portion being so formulated as to dissolve in the mouth at a faster rate than said first portion and thereby to provide relatively fast release of said second medicament.
40 In the pastilles according to the invention

[Price 4s. 6d.]

THE RELATIVE HARNESS OR THE TWO PORTIONS may be controlled by altering the gelatin contents the addition of gums, sugars, sorbitol, or other solids, and by alteration of the glycerin or water content.

The pastille is prepared by mixing the ingredients for each portion, shaping and stoving each portion, the two portions being combined to form the pastille either after stoving or before some or all of the stoving. The hardness of the layer is dependent on the temperature and duration of stoving and the ingredients employed. Examples of compositions from which the second portion may be prepared are as follows:—

EXAMPLE 1

76 lbs. sugar
20½ lbs. glucose
3½ lbs. gelatin
8½ oz. Tartaric Acid

EXAMPLE 2

66 lbs. sugar
27½ lbs. glucose
6 lbs. gelatin
2½ oz. tartaric acid.

Medicaments, and flavourings, if desired, are added to the composition and the mixture

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COMPLETE SPECIFICATION

Improvements in or relating to Pastille Formulations

We, ARMOUR PHARMACEUTICAL COMPANY LIMITED, a British Company, of Hampden Park, Eastbourne, Sussex and ROBERT BARRIE CHRISTIE, a British Subject, of 49 Willingdon Park Drive, Hampden Park, Eastbourne, Sussex, do hereby declare the invention for which we pray that a patent may be granted to us and the method by which it is to be performed to be particularly described in and by the following statement:—

This invention relates to improvements in pastille formulations. More particularly the invention relates to improvements in the formulation of medicinal pastilles.

The primary object of a medicinal pastille is to provide a pleasant means of administering medicaments intended to bathe the mucous membranes. It is well known to use both hard and soft pastille bases, for different purposes.

The soft base is usually sugared and dissolves quickly in the mouth. The hard gum-gelatin base is resistant to all but the most vigorous chewing and lasts a longer time. At present these are always presented as separate formulations.

According to the present invention there is provided a medicinal pastille comprising

(a) a first solid portion, comprising a first medicament intended to provide a relatively prolonged medicinal effect, the said first portion being so formulated as to dissolve slowly in the mouth and thereby to provide slow release of the said medicament in the mouth; and

(b) a second solid portion, comprising a second medicament intended to provide faster medicinal effect than said first medicament, the said second portion being so formulated as to dissolve in the mouth at a faster rate than said first portion and thereby to provide relatively fast release of said second medicament.

In the pastilles according to the invention

[Price 4s. 6d.]

may be incorporated quick acting medicaments in the second portion—for example centrally acting cough suppressants, bronchodilators, etc for cough pastilles, and demulcents, expectorants, and other medicaments intended to act over a longer period may be incorporated in the first portion. 45

The pastilles may be employed to alleviate various conditions, such as sore throats, colds, coughs, indigestion, etc. The dual action pastille may be employed for two conditions together, for example cough and sore throat relief. 50

The relative hardness of the two portions may be controlled by altering the gelatin contents the addition of gums, sugars, sorbitol, or other solids, and by alteration of the glycerin or water content. 55

The pastille is prepared by mixing the ingredients for each portion, shaping and stoving each portion, the two portions being combined to form the pastille either after stoving or before some or all of the stoving. The hardness of the layer is dependent on the temperature and duration of stoving and the ingredients employed. Examples of compositions from which the second portion may be prepared are as follows:— 60

EXAMPLE 1

76 lbs. sugar
20½ lbs. glucose
3½ lbs. gelatin
8½ oz. Tartaric Acid 75

EXAMPLE 2

66 lbs. sugar
27½ lbs. glucose
6 lbs. gelatin
2½ oz. tartaric acid. 80

Medicaments, and flavourings, if desired, are added to the composition and the mixture

SEE ERRATA SLIP ATTACHED

ment, the said second portion being so formulated as to dissolve in the mouth at a faster rate than said first portion and thereby to provide relatively fast release of said second medicament. 5

2. A medicinal pastille as claimed in claim 1 which pastille further comprises one or more flavouring ingredients. 10

3. A medicinal pastille as claimed in claim 1 or claim 2 which is formulated such that either the said first or second portion forms a core surrounded by the said other portion. 15

4. A medicinal pastille as claimed in claim 1 or claim 2 said pastille being formulated as a layered structure. 20

5. A medicinal pastille as claimed in claim 4 wherein said first portion forms an inner layer and said second portion forms two outer layers one on either side of the inner layer. 25

6. A medicinal pastille as claimed in any one of the preceding claims wherein the second medicament comprises dextromethorphan, phenylpropanolamine, ephedrine hydrochloride, pheniramine maleate, benzocaine, hyoscine hydrobromide, isoprenaline sulphate, eucalyptus oil, menthol thymol, or mixtures thereof. 30

7. A medicinal pastille as claimed in any one of the preceding claims wherein the first medicament comprises ammonium chloride, glyceryl guaiacholate, syrup of tolu, liquid extract of squill, sodium benzoate, liquid extract of ipecacuanha, cresol, phenol, bis-muth carbonate, aluminium hydroxide, p-chlorophenol, or mixtures thereof. 35

8. A process for manufacturing a medicinal pastille claimed in claim 1, which process comprises mixing the ingredients for each portion, shaping and stoving each portion, the two portions being combined to form an integral pastille. 40

9. A process as claimed in claim 8 wherein the stoving of the first portion is carried out over a longer period, and at a higher temperature, than the stoving of the second portion. 45

10. A process as claimed in claim 8 or claim 9 wherein part of the stoving of the portions constituting the pastille is carried out after the two portions are combined. 50

11. A process as claimed in any one of claims 8 to 10 the relative hardness of the two portions is controlled by altering the gelatin content, the addition of gums, sugars, sorbitol, or other solids or by alteration of the glycerin or water content. 55

12. A medicinal pastille as claimed in claim 1 wherein the second portion is prepared from a composition substantially as described in Example 1 or Example 2. 60

13. A medicinal pastille as claimed in claim 1 wherein the first portion is prepared from a composition substantially as described in any one of Examples 3 to 5. 65

14. A process as claimed in claim 8 substantially as described in Example 6 or Example 7. 70

15. A medicinal pastille as claimed in claim 1 whenever prepared by a process as claimed in any one of claims 8,9,10,11, 14 and 15.

BOULT, WADE & TENNANT,
111 & 112, Hatton Garden, London, E.C.1.
Chartered Patent Agents,
Agents for the Applicant(s).

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